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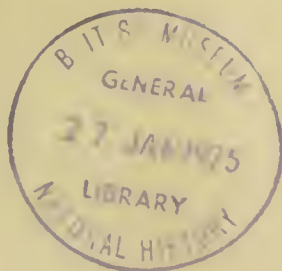
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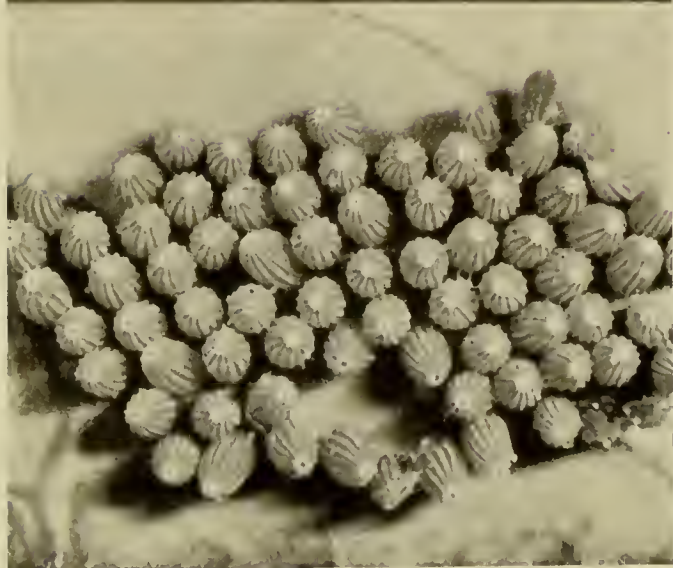
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GOWANS'S NATURE BOOKS, No. 15



SOME MOTHS AND BUTTERFLIES
AND THEIR EGGS



LARGE WHITE BUTTERFLY
(*Pieris brassicae*)

A. E. Tonge, Photo.

SOME MOTHS AND BUTTERFLIES AND THEIR EGGS

Sixty photographs from nature, by A. E. Tonge, F.E.S.

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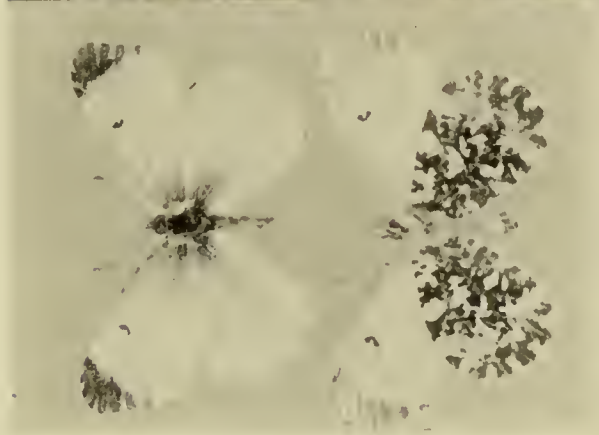
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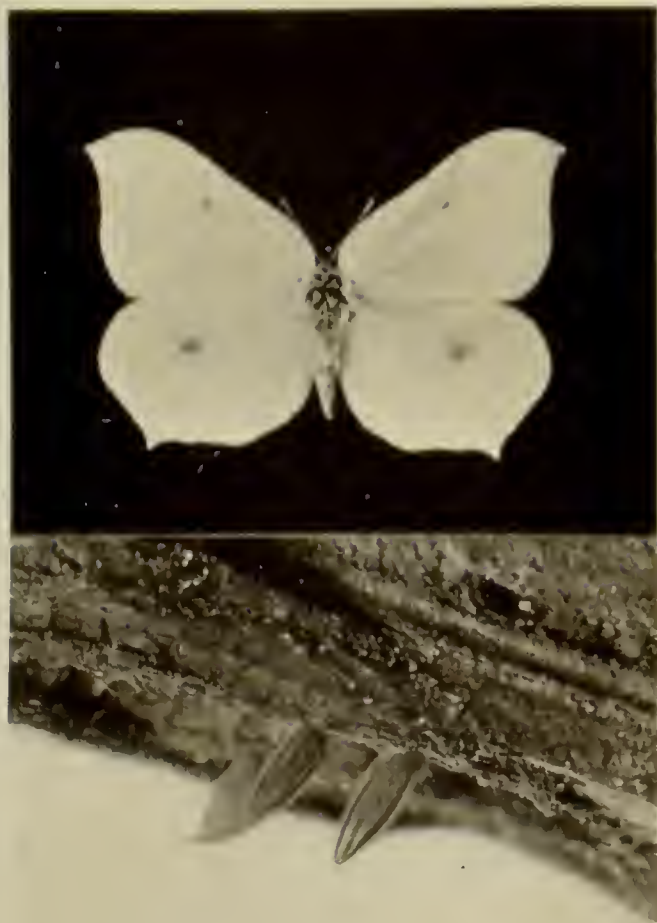
· *THOUGH the value of this addition to GOWANS'S NATURE BOOKS will be best appreciated by entomologists, the beautiful photographs it contains have qualities that must appeal to every lover of nature. Some interesting details will be found at the end of the book; meanwhile it may be mentioned that all the insects are given natural size and all the eggs enlarged 10 diameters. The names are those given in Staudinger's Catalogue (1901). The English synonyms are those believed to be current, and are taken from Edward Newman. The order in which the species follow one another is that most usually observed.*



A. E. Tonge, Photo.



ORANGE TIP BUTTERFLY
(*Euchloë cardamines*)

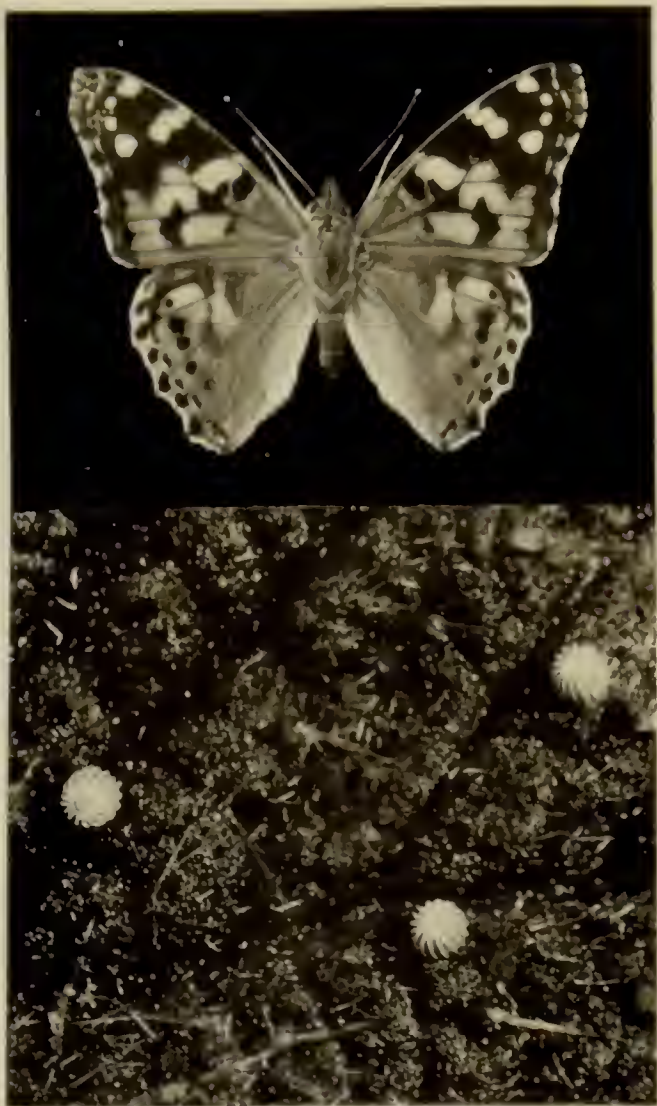


BRIMSTONE BUTTERFLY
(*Gonopteryx rhamni*)

A. E. Tonge, Photo.



SMALL TORTOISESHELL BUTTERFLY *A. E. Tonge, Photo.*
(*Vanessa urticae*)

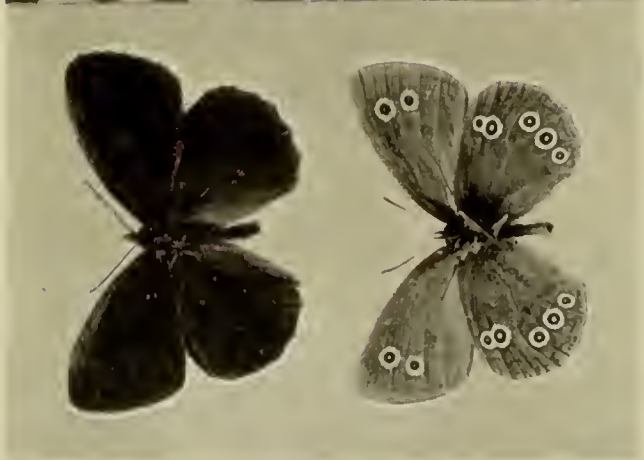


PAINTED LADY BUTTERFLY
(*Pyrameis cardui*)

A. E. Tonge, Photo.



4. E. Yonge, Photo.

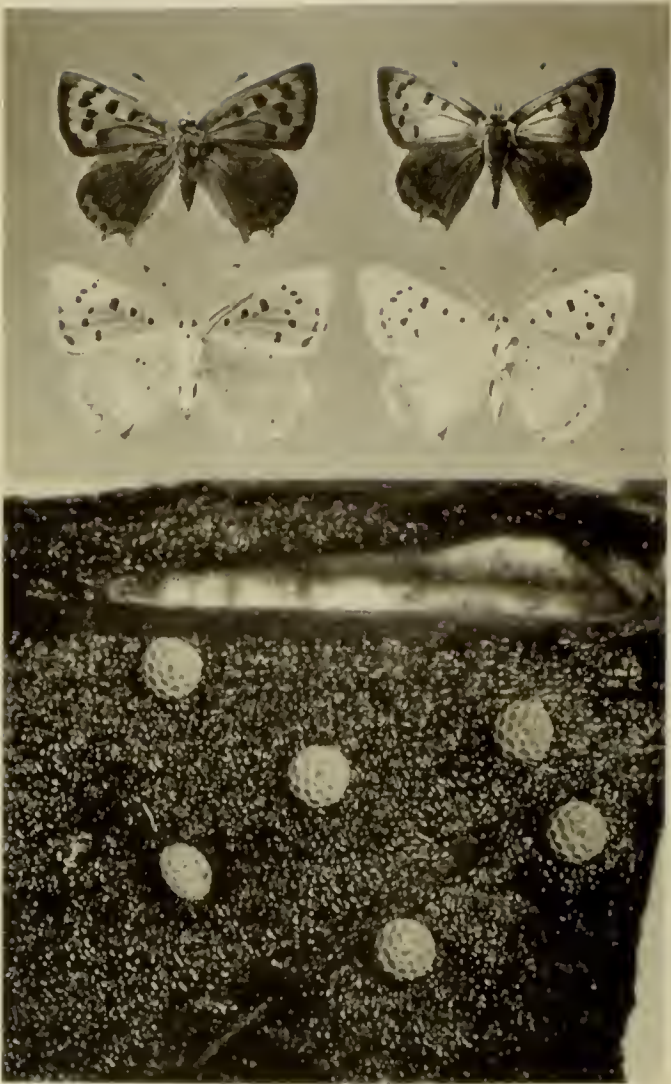


RINGLET BUTTERFLY
(*Aphantopus hyperantus*)



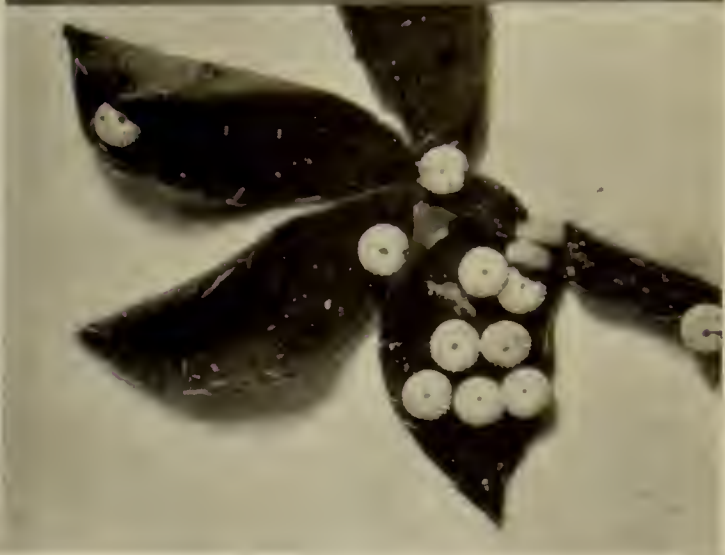
SMALL HEATH BUTTERFLY
(*Cnonympha pamphilus*)

A. E. Tonge, Photo.



SMALL COPPER BUTTERFLY
(*Chrysophanus phileas*)

A. E. Tonge, Photo.



COMMON BLUE BUTTERFLY
(*Lycena icarus*)

A. E. Tonge, Photo.



LARGE SKIPPER BUTTERFLY
(*Augiades sylvanus*)

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ELEPHANT HAWK MOTH
(*Charocampa elpenor*)

A. E. Tongt, Photo.

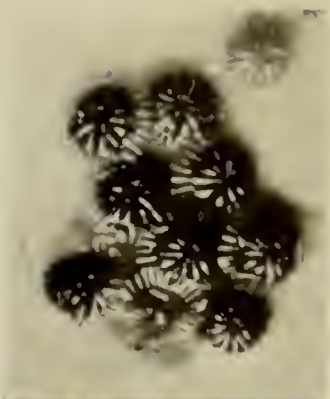


POPLAR HAWK MOTH
(*Smerinthus populi*)

A. E. Tonge, Photo.



GREEN SILVER LINES MOTH
(*Hylophila prasinana*)



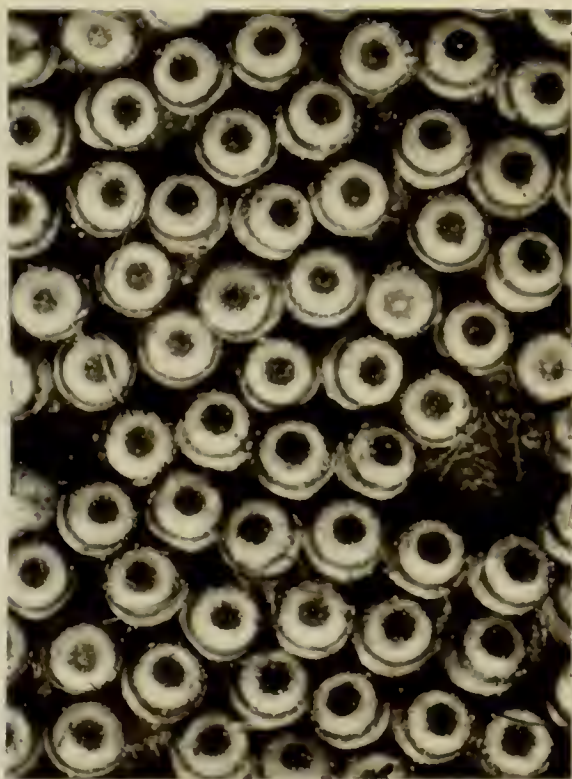
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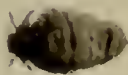
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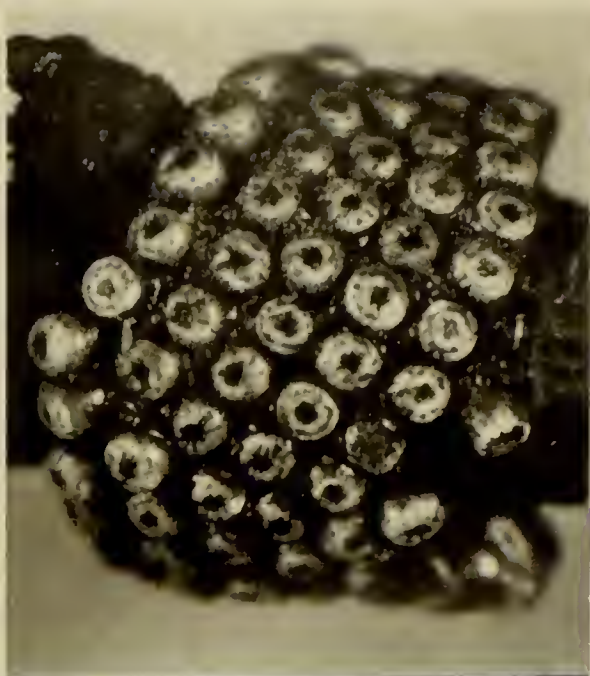
BUFF ERMINE MOTH
(*Spilosoma lubricipeda*)



A. E. Tong, Photo.



COMMON VAPOURER MOTH
(*Orgyia antiqua*)



A. E. Tonge, Photo.

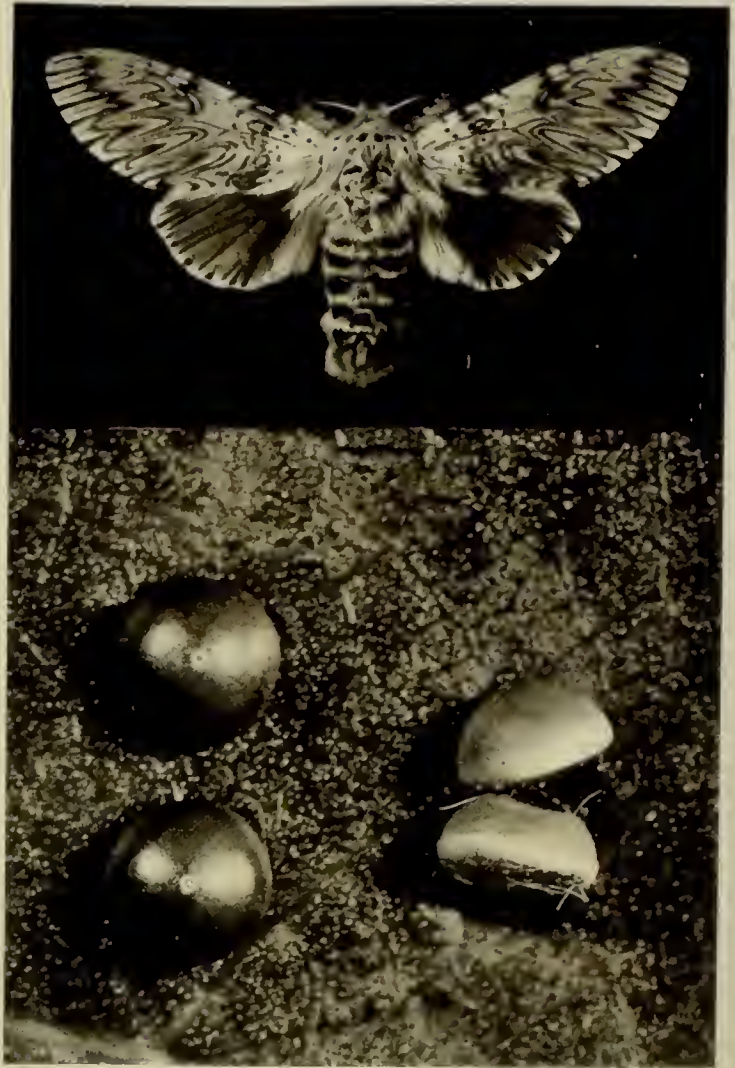


LACKEY MOTH
(*Malacosoma neustria*)



DRINKER MOTH
(*Cosmotriche potatoaria*)

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PUSS MOTH
(*Dicranura vinula*)

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BUFF-TIP MOTH
(*Phalera bucephala*)

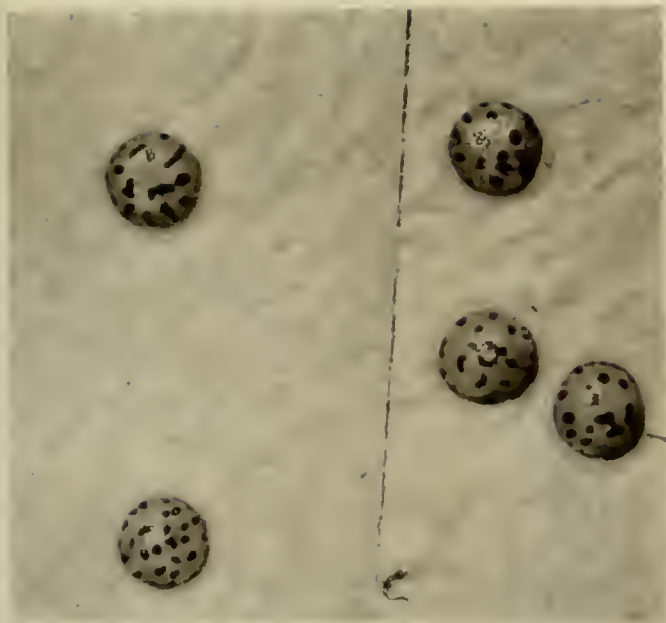


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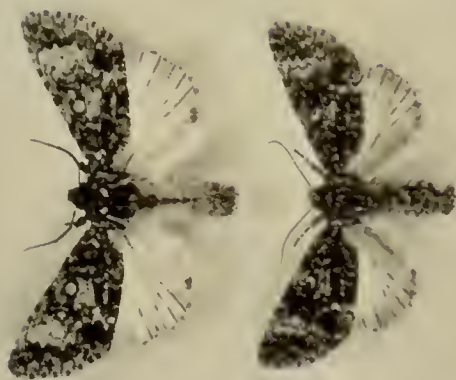


MARBLED BEAUTY MOTH
(*Bryophila perla*)

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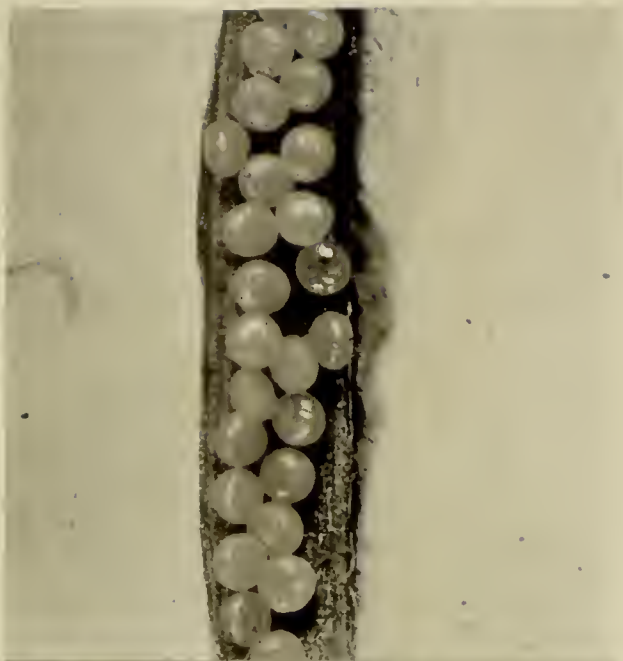
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POPLAR GRAY MOTHS
(*Acronicta megacephala*)



DARK ARCHES MOTH
(*Hadena monoglypha*)



A. E. Tonge, Photo.



A. E. Tenge, Photo.



CABBAGE MOTH
(*Mamestra brassicae*)



TREBLE LINES MOTH
(*Grammesia trigrammica*)

A. E. Tonge, Photo.



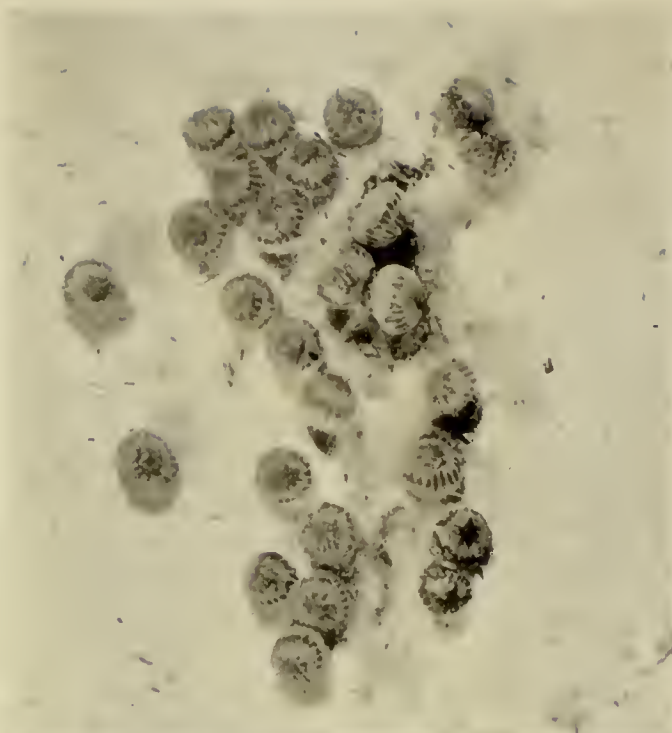
HEAR AND DART MOTH
(*Agrotis exclamatoria*)

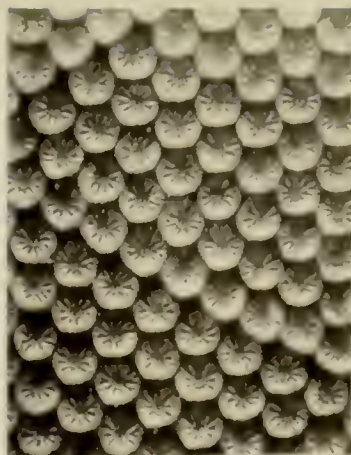
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SQUARE SPOT RUSTIC MOTH
(*Agrotis xanthographa*)

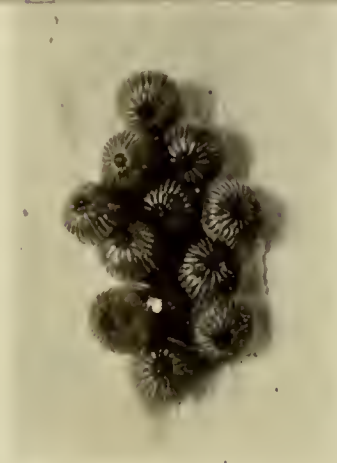




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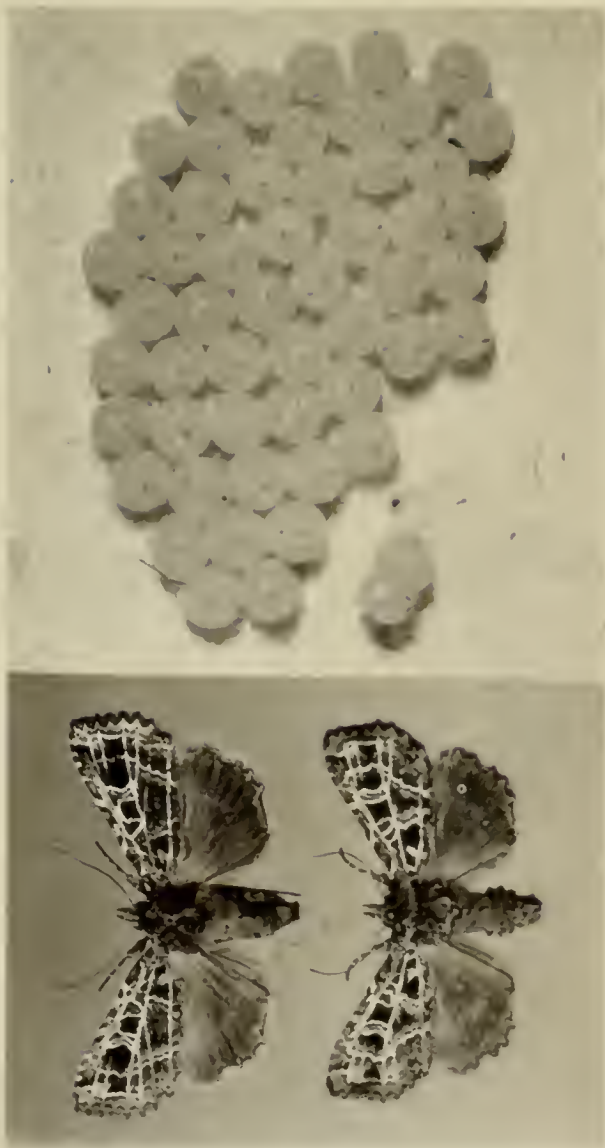


LARGE YELLOW UNDERWING MOTTH
(*Agrotis pronuba*)



COPPER UNDERWING MOTH
(*Amphipyra pyramidea*)

A. E. Tonge, Photo.



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GOthic Moth
(*Naenia typica*)

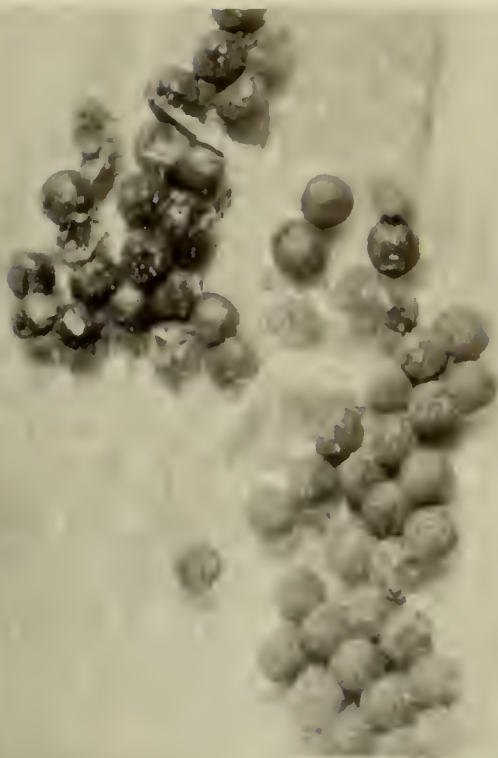


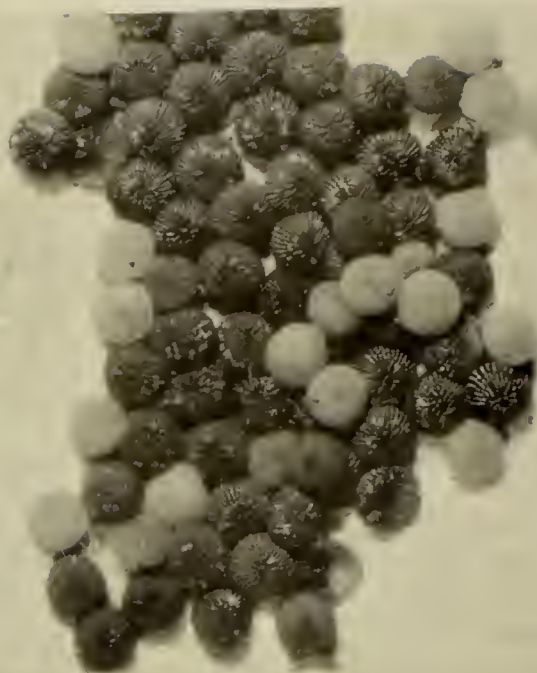
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COMMON QUAKER MOTH
(*Teneocampa stabilis*)

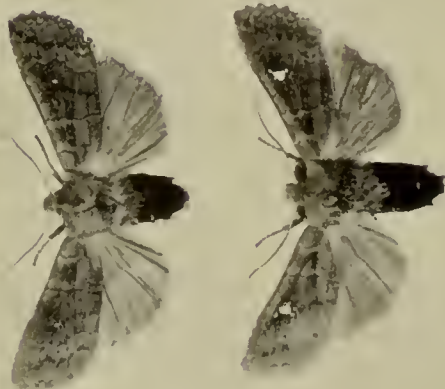
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BEADED CHESTNUT MOTH
(*Orthosia pistacina*)



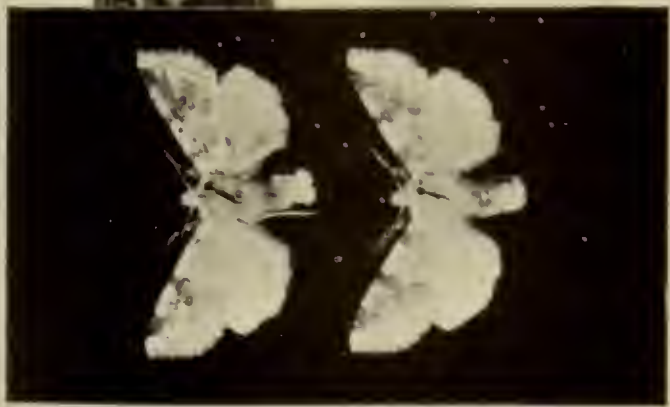


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SATELLITE MOTH
(*Scopelosoma satellitia*)

A. E. Tonge, Photo.

SALLOW MOTTH
(*Xanthia fulvago*)



GREEN BRINDLED CRESCENT MOTH
(*Miselia oxyacanthæ*)



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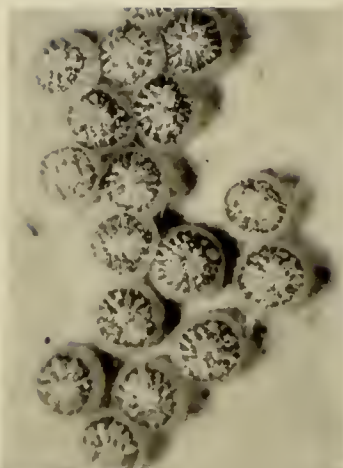


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MARVEL DU JOUR MOTTE
(*Dichonia aprilina*)



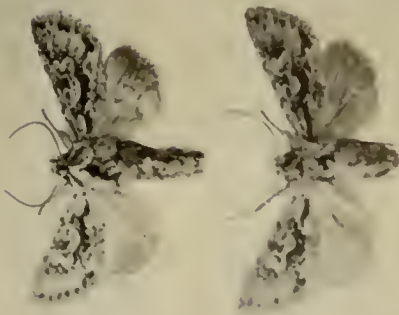
ANGLESHADES MOTH
(*Brotolomia meticulosa*)



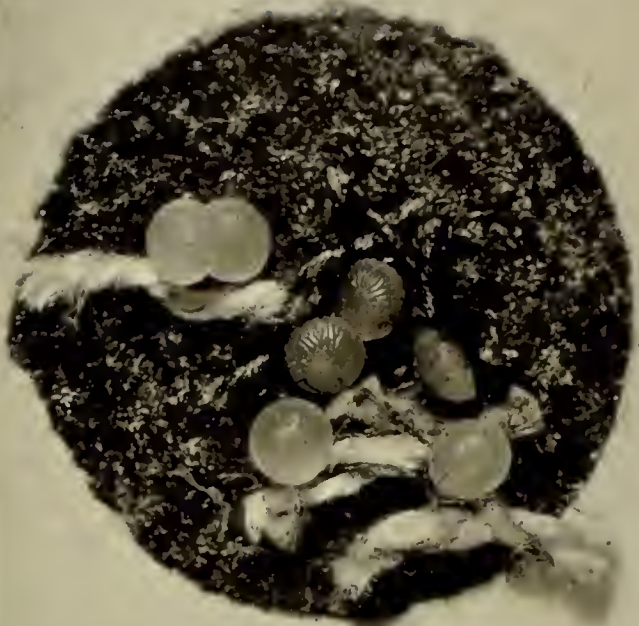
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EARLY GRAY MOTHS
(*Nyctocampa arctola*)



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HERALD MOTH
(*Scoliopteryx libatrix*)



SILVER Y MOTH
(*Plusia gamma*)

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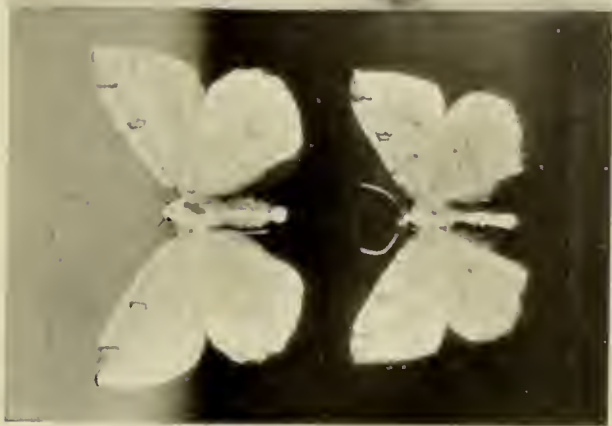
RED UNDERWING MOTII
(*Catocala nupta*)

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SWALLOW-TAILED MOTH
(*Ourapteryx sambucaria*)

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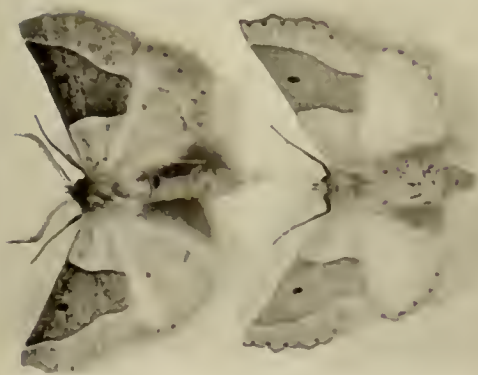
BRIMSTONE MOTH
(*Opisthographis luteolata*)



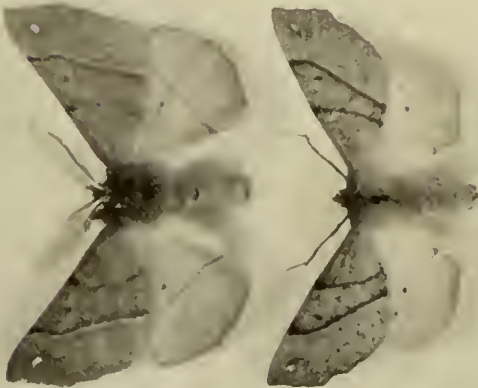
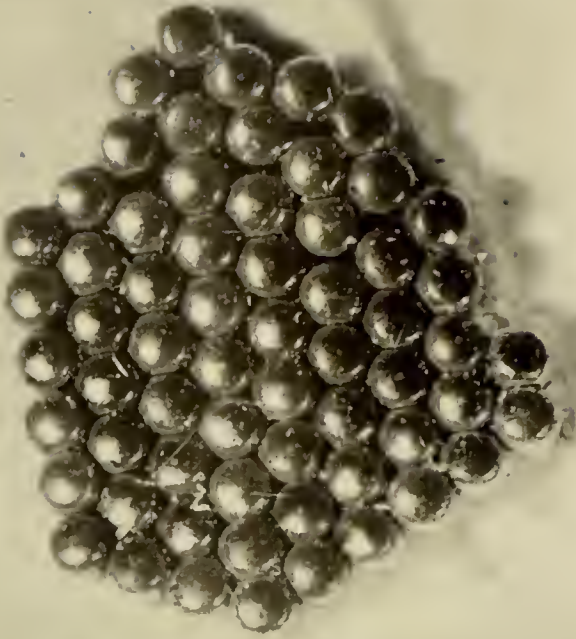
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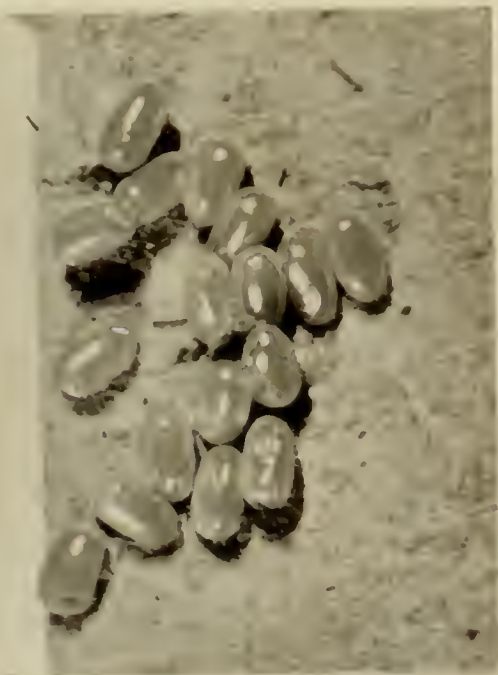


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SCALLOPED OAK MOTH
(*Crocallis elinguaris*)





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PALE BRINDLED BEAUTY MOTH
(*Phigalia pedaria*)



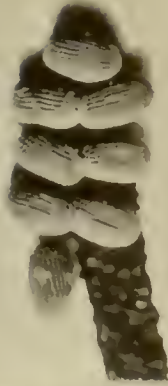
WAVED UMBER MOTH
(*Hemerophila abruptaria*)



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WILLOW BEAUTY MOTH
(*Bourmia gemmaria*)



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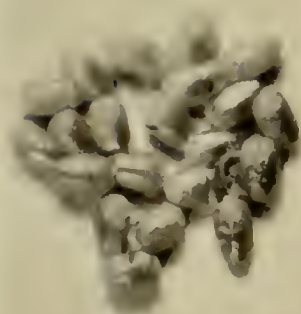


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V MOTH
(*Selidosema wauwaria*)



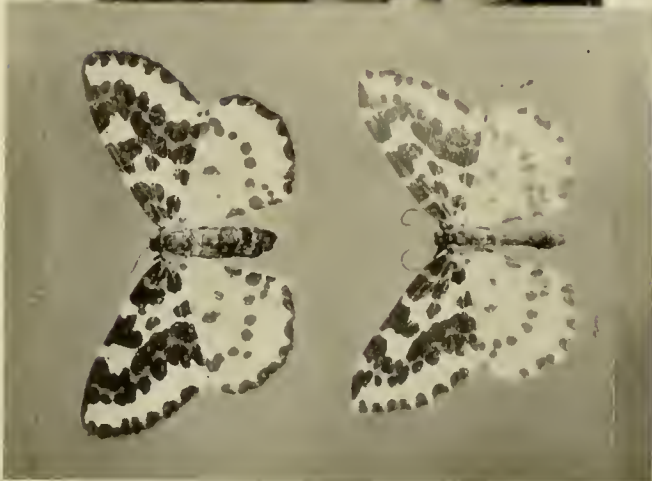
COMMON HEATH MOTH
(*Ematurga atomaria*)



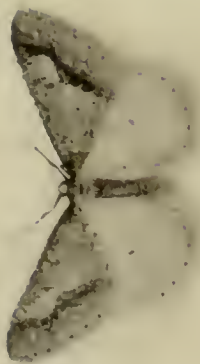
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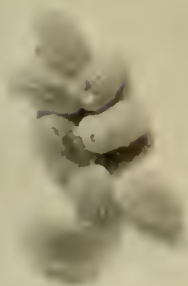
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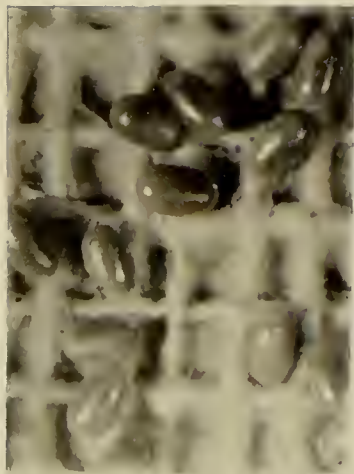
CURRENT MOTH
(*Abraxas grossulariata*)



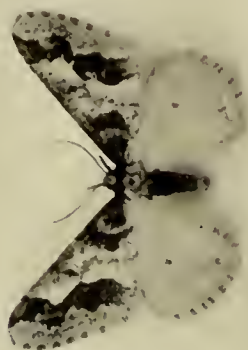
DOTTED BORDER MOTH
(*Hybernia marginaria*)



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A. E. Tonge, Photo.



MOTTLED UNDER MOTII
(*Hybernina defoliaria*)



MARCH MOTH
(*Anisopteryx aescularia*)

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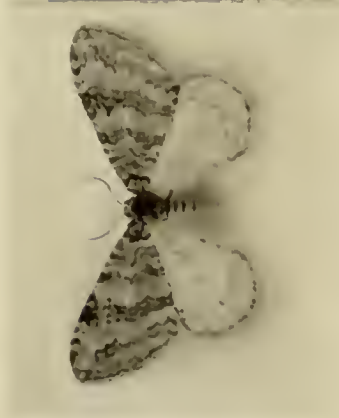


WINTER MOTH
(*Cheimatomia brumata*)

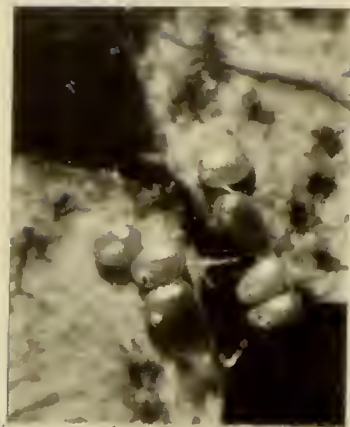
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NOVEMBER MOTH
(*Larentia dilutata*)



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GARDEN CARPET MOTH
(*Larentia fluctuata*)



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SHOULDER STRIPE MOTH
(*Larentia badiata*)



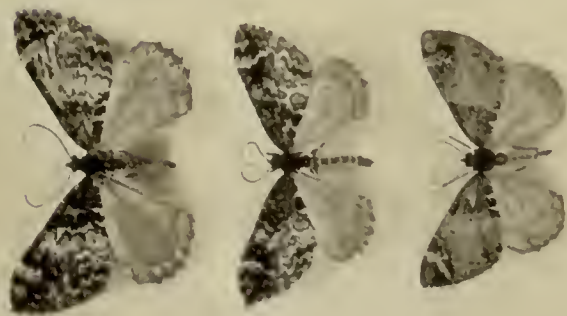
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YELLOW SHELL MOTH
(*Larentia bilineata*)



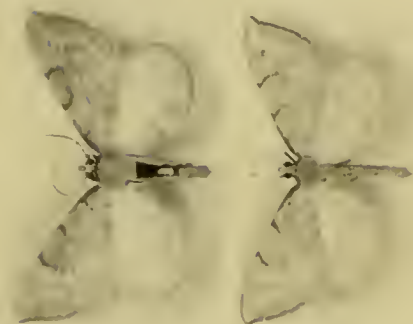
A. E. Tonge, Photo.



COMMON MARBLED CARPET MOTH
(*Larentia truncata*)



A. E. Tonge, Photo.



BARRED STRAW MOTII
(*Larentia dotata*)

Some Notes on the Butterflies, Moths, ^{and} their Eggs,

OF WHICH

PHOTOGRAPHS APPEAR IN
THE FOREGOING PAGES . .

BY

A. E. TONGE,

(Fellow of the Entomological Society of London).

INTRODUCTORY.

THE eggs of Butterflies and Moths are very minute objects, varying in size from a tiny atom less than $\frac{1}{100}$ th of an inch in diameter, which would easily drop through a hole made by a pinprick, to about $\frac{1}{10}$ th of an inch across.

When examined with a microscope they are found to be in most cases very beautiful objects, often decorated with boldly sculptured patterns of varying forms, and coloured with yellows, greens, or reds. Sometimes the colours are due to the little caterpillar inside showing through a semitransparent shell, and invariably a very marked change in the colouration takes place as the time for hatching approaches.

They may be broadly divided into two groups "upright" and "flat," the former comprising those species in which the micropyle is situated at a point approximately vertical to the surface on which the egg is laid, while in the latter it is at right angles.

They may be laid singly or in large or small batches in all sorts of situations, from bark and twigs in the winter, to grass and leaves of whatever sort the resulting caterpillar will eat at other seasons, while some species appear to scatter them at random amongst suitable vegetation.

The duration of the egg stage varies from five or six days, to as much as nine months, according to the habit of the species, lasting longest of course in those which pass the winter as eggs. All the eggs illustrated in this little book are magnified to precisely the same extent, 10 diameters (or 100 times), so that it may be possible to compare the proportionate size of one species with another. The illustrations of the perfect insects are all natural size.

The names are those given in Staudinger's Catalogue (1901); and though subject to modifications by the more recent work of Hampson, Prout, Tutt, etc., there is no later complete view of the nomenclature of Palearctic Lepidoptera. The English synonyms are those believed to be current, and agree generally with those given by Edward Newman (*British Butterflies and Moths*). The times of year given are generally those in which the photographs of the eggs were obtained.

ABBREVIATIONS USED.

Bdv., . . .	Boisduval.	Latr., . . .	Latreille.
Bork., . . .	Borkhausen.	Leach, . . .	Leach.
Brahm., . . .	Brahm.	Ld., . . .	Lederer.
Curt., . . .	Curtis.	Mill., . . .	Millière.
Clerck., . . .	Clerck.	Och., . . .	Ochsenheimer.
Dup., . . .	Duponchel.	Rott., . . .	Rottenburg.
Esp., . . .	Esper.	Schiff., . . .	Schiffermüller.
Fb., . . .	Fabricius.	Schr., . . .	Schranck.
Germ., . . .	Germar.	Stph., . . .	Stephens.
Gn., . . .	Guenée.	Thnb., . . .	Thunberg.
Hb., . . .	Hübner.	Tr., . . .	Treitschke.
Hufn., . . .	Hufnagel.	View., . . .	Vieweg.
L., . . .	Linnaeus.	Wallgr., . . .	Wallengren.

Large White Butterfly.—*Pieris (Schr.) brassicae (L.)*—Frontispiece. Female. The eggs are golden yellow and upright with bold longitudinal ribs, and are laid in batches on the leaves of cabbages and other similar plants on which the caterpillar feeds. June.

Orange-tip Butterfly.—*Euchloë (Hb.) cardamines, (L.)*—Page 6. Females, upper surface shown above and under surface below. The male has the tips of the fore-wings orange coloured for about two-fifths of their area. Egg laid singly on seed pod or flower stalk of wild mustard on which the caterpillar feeds. Colour, pale orange. upright, and ribbed both longitudinally and horizontally. May.

Brimstone Butterfly.—*Gonopteryx (Leach) rhamni (L.)*—Page 7. Female, also called the Sulphur Butterfly. Is one of the earliest insects met with in spring, as it hibernates during the winter and a mild sunny day tempts it to come out. The eggs are green when laid but soon turn yellow and are very beautifully ribbed both longitudinally and horizontally, stand upright, and are usually laid singly on the undersurface of a leaf of buckthorn (*Rhamnus frangula*). April, May.

Small Tortoiseshell Butterfly.—*Vanessa (Fb.) urticae (L.)*—Page 8. Female, upper and under surfaces shown. The sexes are not distinctively coloured. Eggs upright, bright green in colour and with longitudinal whitish ribs. Are laid in batches on the underside of a leaf of stinging nettle (*Urtica*). May.

Painted Lady Butterfly.—*Pyrameis (Hb.) cardui (L.)*—Page 9. Female. The sexes are similar in colour and markings. Eggs upright, pale green with many bold longitudinal ribs. Laid usually singly on thistles and nettles. June.

Ringlet Butterfly.—*Aphantopus (Wallgr.) hyperantus (L.)*—Page 10. Upper and under surfaces. The sexes are similar in appearance. Eggs upright, pearly white with very faint longitudinal ribs, and appear to be scattered promiscuously amongst the grass. August.

Small Heath Butterfly.—*Canonympha (Hb.) pamphilus (L.)*—Page 11. Females on L., males on R., upper and under surfaces. Eggs upright, somewhat flattened on the top. Pale green or yellow with dark reddish brown markings and rather faint ribs. Laid apparently singly on grass. August.

Small Copper Butterfly.—*Chrysophanus (Hb.) phlaeas (L.)*—Page 12. Females on L., males on R., upper and under surfaces. Eggs upright, bun shaped, yellowish white turning greyer as they mature. Covered with a very boldly sculptured network, the ridges of which are rather paler in colour. Laid on sorrel. June.

Common Blue Butterfly.—*Lycæna (Fb.) icarus (Rott.)*.—Page 13. Females on L., males on R., upper and under surfaces. Eggs upright, button shaped, greenish white with a darker tint in the shadows and boldly sculptured resembling white coral. Laid on bird's foot trefoil (*Lotus Corniculatus*). August.

Large Skipper Butterfly.—*Argiades (Hb.) sylvanus (Esp.)*.—Page 14. Males on L., females on R., upper and under surfaces. Eggs upright, domeshaped, with slight depression on the top and faintly ribbed longitudinally. Colour greenish white. Laid singly on grass. July.

Elephant Hawk Moth.—*Charocampa (Dup.) elpenor (L.)*.—Page 15. Eggs flat, green, ovoid, devoid of sculpture. Laid in July on bedstraw, willow herb, fuchsia, etc., usually near water.

Poplar Hawk Moth.—*Smerinthus (Latr.) populi (L.)*.—Page 16. Male. Eggs flat, green, nearly smooth. Laid in May and June on leaves of poplar, and more rarely on willow. Usually singly or in pairs.

Green Silver Lines Moth.—*Hylophila (Hb.) prasinana (L.)*.—Page 17. Eggs upright with conspicuous vertical ribs. When mature the colour is deep ruby red in the centre, but the outer covering remains transparent. Laid in May and June on the leaves of many trees, such as oak, beech, hazel, etc.

Buff Ermine Moth.—*Spilosoma (Stph.) lubricipeda (L.)*.—Page 18. Female above, male below. Eggs upright, nearly spherical with flattened base, smooth, pale greenish white, turning greyish when about to hatch. This is in great part due to the black hairs of the larva inside showing through the shell as a dark ring. Laid in large batches in June and July on the leaves of a large variety of plants and shrubs.

Common Vapourer Moth.—*Orgyia (Och.) antiqua (L.)*.—Page 19. Male above, female below (wingless). Eggs upright, nearly spherical, depressed at top around micropyle. Stone colour with dark patch in centre, and a ring of same colour. Smooth, or nearly so, under low power magnification. Laid in large batches on the outside of the cocoon, which contained the chrysalis of the mother, and may be found under the coping of walls and fences, and on the trunks and branches of most trees during the winter, September to March.

Lackey Moth.—*Malacosoma (Hb.) neustria (L.)*.—Page 20. Female above, male below. Eggs upright, smooth, pale buff with brown markings, laid in a compact and tight ring around the twigs of blackthorn or whitethorn, and firmly cemented together with a black asphalt-like substance. August to March.

Drinker Moth.—*Cosmotriche (Hb.) petatoria (L.)*.—Page 21. Female above, male below. Eggs flat, ovoid, shell finely pitted all over, pale greenish white with darker greenish grey markings. Usually laid a few at a time on grass and low herbage in July, but may be found on posts and fences occasionally.

Puss Moth.—*Dicranura (Bdv.) vinula (L.)*.—Page 22. Eggs upright, button-shaped, surface rough, colour reddish brown, somewhat paler in centre and below. Laid singly or in pairs on upper surface of leaves of poplar, willow, willow, etc. May and June. Two empty eggshells laid sideways are shown in the photograph to give a better idea of the shape.

Buff-tip Moth.—*Phalera (Hb.) bucephala (L.)*.—Page 23. Female. Eggs upright, nearly spherical, flattened below, surface roughened, pale bluish white with dark central spot and dark underneath. Laid in large batches on the underside of leaves of lime, elm, beech, hirsch, etc. May to July.

Marbled Beauty Moth.—*Bryophila* (Tr.) *perla* (Fb.).—Page 24. The white form shown on the right is a rare one in the collection of C. W. Colthrup, Esq. Eggs upright, nearly globular but flattened, and with conspicuous vertical ribs. White with deep red blotches. Laid on old walls amongst the lichens, etc., on which the larva feeds. July and August.

Poplar Grey Moth.—*Acronicta* (Och.) *megacephala* (Fb.).—Page 25. Eggs upright, very shallow, pale whitish green with chocolate spots, and a transparent outer covering with faint vertical ribs. Laid on poplar leaves June and July.

Dark Arches Moth.—*Hadenia* (Schranck) *monoglyphia* (Hufn.).—Page 26. Male above, female below. Eggs upright, globular, flattened, pale semitransparent greenish white, with very faint vertical ribs, are small for so large an insect. Laid inside the leaf sheath on grass stems in batches. August.

Cabbage Moth.—*Mamestra* (Och.) *brassica* (L.).—Page 27. Female. Eggs upright, bunshaped. yellowish white, with spot and ring pale purple, ribbed vertically. Laid in batches under the leaves of cabbages, etc. June to August. A garden pest.

Treble Lines Moth.—*Grammesia* (Stph.) *trigrammica* (Hufn.).—Page 28. The lower figure is the variety *v. bilinea* (Hb.). Eggs upright, bunshaped. whitish, with central spot and ring yellowish brown, and many vertical ribs. Laid in confinement on plantain leaves in June.

Heart and Dart Moth.—*Agrotis* (Och.) *exclamationis* (L.).—Page 29. Eggs upright, nearly spherical, brownish white, with central blotch and irregular outer ring purple red, and many vertical ribs. Laid on leaves and stems of turnips, cabbages, and other similar plants in July and August.

Square Spot Rustic Moth.—*Agrotis* (Och.) *xanthographa* (Fb.).—Page 30. Eggs upright, rather conical, dirty whitish, with central patch and outer ring dull red, ribbed vertically. On grass, dock, and other low plants in August and September.

Large Yellow Underwing Moth.—*Agrotis* (Och.) *pronuba* (L.).—Page 31. Eggs upright, rather conical, and very small for so large a moth. Are white when laid but turn purplish gray when about to hatch and are very boldly ribbed vertically. Laid in very large batches (sometimes amounting to nearly a thousand eggs) on any convenient position. I have found them in my own garden on the leaves of privet and rose and also the tendrils of a passion flower and a twig of a dead conifer. July and August.

Copper Underwing Moth.—*Amphipyra* (Och.) *pyramidea* (L.).—Page 32. Eggs upright, bunshaped, reddish brown in colour. Very beautifully sculptured with bold vertical ribs. Laid in small batches on twigs of oak, birch, etc., in September and October and do not hatch until the following spring.

Gothic Moth.—*Naenia* (Stph.) *typica* (L.).—Page 33. Eggs upright, rather conical, pale whitish yellow with a small dark spot in centre, which is probably the head of the larva showing through the shell. Not very boldly ribbed vertically. Were found in a large batch on a leaf of iris in August.

Common Quaker Moth.—*Taniocampa* (Gn.) *stabilis* (Vieu.).—Page 34. Eggs upright, conical, pale green when laid and turn gradually to dark slatey colour as they mature. Sculptured with a great many vertical ribs. Were laid in a batch on oak in April.

Beaded Chestnut Moth.—*Orthosia* (Och.) *pistacina* (Fb.).—Page 35. Eggs upright, nearly globular, flattened at base. Pale yellow when laid, turning gradually pinkish with fine markings of

purple brown at maturity, closely sculptured with fine vertical ribs. Were laid in confinement on the sides of the box in preference to grass stems. October and November.

Satellite Moth.—*Scopelosoma* (Curt.) *satellitica* (L.)—Page 36. Eggs upright, bunshaped, pale yellow when laid, but soon turning dark purple brown with a few small whitish patches. Very prettily sculptured with vertical ribs, and a conspicuous micropylar rosette on the top. Laid on twigs of oak in late March and April.

Sallow Moth.—*Xanthia* (Och.) *fulvago* (L.)—Page 37. Eggs upright, bunshaped, purple red, with many vertical ribs. Were laid on unopened sawfly buds in small batches, the eggs being cemented together and pushed into the crevices. Oct. and Nov.

Green Brindled Crescent Moth.—*Miselia* (Och.) *oryzanthæ* (L.)—Page 38. The lower specimen is a dark variety known as *v. Catucina* (Mill.). Eggs upright, conical, flattened at base, dirty whitish with dark purplish blotches and bold vertical ribs. Laid on twigs of blackthorn in October and November. Hatch the following March.

Marvel du jour Moth.—*Dichonia* (Hb.) *aprilina* (L.)—Page 39. Eggs upright, bunshaped, smooth and with only faint traces of vertical ribbing. Whitish with blood red markings. Laid on twigs and buds of oak in October.

Angle Shades Moth.—*Brotolomia* (Ld.) *meticulosa* (L.)—Page 40. Eggs upright, conical, boldly ribbed vertically, and with a rather conspicuous micropylar button. White when laid, turn very pale yellow and soon develop an irregular dull reddish ring and spot. The eggs were laid in a batch on a dock leaf in September, but the insect is almost continuously brooded, and I have had it in all its four stages at the same time of year.

Early Gray Moth.—*Nylocampa* (Gn.) *areola* (Esp.)—Page 41. Male above, female below. Eggs upright, conical, flattened at base, white when laid, afterwards beautifully mottled with rosy red. Boldly ribbed vertically. Laid on leaves and twigs of honeysuckle in April.

Herald Moth.—*Scoliopteryx* (Germ.) *libatrix* (L.)—Page 42. Eggs upright, bunshaped, with rather faint vertical ribs. Pale whitish green in colour, and were laid on the muslin cover of the box in which the insect was confined in preference to the willow leaves provided. April.

Silver Y Moth.—*Plusia* (Och.) *gamma* (L.)—Page 43. Eggs upright, bunshaped, much ribbed vertically, semi-transparent whitish when laid. Developed a small purple spot near centre and turned a slaty purple before hatching. Were laid on the leaves of field pea singly in July.

Red Underwing Moth.—*Catocala* (Schr.) *nupta* (L.)—Page 44. Eggs upright, bunshaped, boldly ribbed vertically and with a prominent micropylar rosette. Dirty whitish in colour with purple brown central blotch and outer ring. Laid on bark and twigs of willow in August and did not hatch till the following April or May.

Swallow-tailed Moth.—*Ouvapteryx* (Leach) *sambucaria* (L.)—Page 45. Eggs upright, flattened at top, with 13 or 14 vertical ribs which terminate three-fourths of the way down the side. Colour pale yellow. Were laid in very small groups on underside of leaves of clematis and ivy in July.

Brimstone Moth.—*Opisthograptis* (Hb.) *luteolata* (L.)—Page 46. Female above, male below. Eggs flat, nearly smooth and rather shiny. Pale yellow with spots or blotches of reddish brown. Laid on leaves of hawthorn in June.

Scalloped Oak Moth.—*Crocallis (Tr.) elinguaris (L.)*—Page 47. Male above, female below. Eggs flat, brickshaped, smooth, brownish white with blotches of dark brown. Are usually laid in straight rows side by side along the twigs of blackthorn, etc. July and August. Hatch the following spring.

Feathered Thorn Moth.—*Himera (Dup.) pennaria (L.)*—Page 48. Male above, female below. Eggs upright, smooth and rather shiny. Pale olive green. Were laid in a close batch on a piece of oak bark in November.

Pale-brindled Beauty Moth.—*Phigalia (Dup.) pedaria (Fb.)*—Page 49. Male above, wingless female below. Eggs flat, smooth and shiny, pale olive green. Laid on twigs of oak in March.

Waved Umber Moth.—*Hemerophila (Stph.) abruptaria (Thnb.)*—Page 50. Female. Eggs flat, bright green turning purple later. Boldly sculptured with a hexagonal network and having in certain lights a white dot at each angle of the hexagons. Were laid on leaves of privet and lilac chiefly near the stalk or between the leafstalk and the twig. May.

Willow Beauty Moth.—*Boarmia (Tr.) gemmaria (Brahm)*—Page 51. Eggs flat, boldly sculptured with longitudinal ribs or pits, bright green clouded with reddish. Were laid on the paper lining of the box in preference to oak leaves provided. August.

V-Moth.—*Selidosema (Hb.) wauaria (L.)*—Page 52. Female. Eggs flat, sculptured with hexagonal network over surface, consisting of depressions and ridges. Emerald green when laid, and turning reddish brown when near hatching. Laid on underside of gooseberry leaf. August.

Common Heath Moth.—*Ematurga (Ld.) atomaria (L.)*—Page 53. Male. The female has plain antennæ. Eggs yellowish green, with rows of depressions on surface. Shape flat, ovoid, rather thinner at one end. Laid in June on various low plants, usually near or amongst heather.

Currant Moth.—*Abraxas (Leach) grossulariata (L.)*—Page 54. Female above, male below. Eggs flat, ovoid, pale greenish yellow, covered all over with small shallow depressions. Laid in batches beneath the leaves of blackthorn, currant, euonymus, etc., in July, and hatch in two or three weeks.

Dotted Border Moth.—*Hybernia (Latr.), marginaria (Bork.)*—Page 55. Male specimen shown, the female has only rudimentary wings. Eggs flat, ovoid, with irregular longitudinal ribs. Colour bright green. Laid in March and April on twigs of various trees and shrubs. Often on rose trees in gardens.

Mottled Umber Moth.—*Hybernia (Latr.) defoliaria (Clerck)*—Page 56. Male specimen shown, the female is entirely wingless. Eggs flat, ovoid, rather cylindrical, with a network of very shallow depressions all over the surface. Bright yellow. Laid on the twigs of oak, beech, and other trees. October to December.

March Moth.—*Anisopteryx (Stph.) æscularia (Schiff.)*—Page 57. Male above, female below (entirely wingless). Eggs apparently flat, but varying in shape somewhat owing to pressure as they are laid closely together around a twig of blackthorn in March or April, and covered over with hairy down from the body of the mother insect. Colour brown.

Winter Moth.—*Cheimatobia (Stph.) brumata (L.)*—Page 58. The male only is shown, the female being wingless. Eggs flat, ovoid, with rows of depressions forming a pattern on the surface, shiny. Orange colour. Laid on twigs of fruit and other trees (November and December), sometimes in great numbers. Hatch next Spring.

November Moth.—*Larentia (Tr.) dilutata (Bork.)*—Page 59. Eggs flat, ovoid, pitted over surface with shallow depressions. Rather shiny. Colour rosy red. On twigs of oak, birch, etc., in October and November.

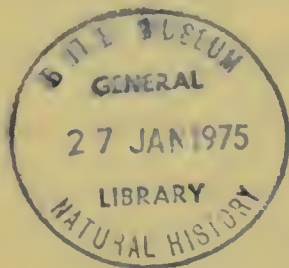
Garden Carpet Moth.—*Larentia (Tr.) fluctuata (L.)*—Page 60. Light and dark forms. Eggs flat, ovoid, tapering to one end. Pale yellow pitted all over with somewhat conspicuous depressions. On nasturtium June, but may be found on a variety of garden plants throughout the summer months.

Shoulder Stripe Moth.—*Larentia (Tr.) badiata (Hb.)*—Page 61. Eggs flat, ovoid, tapering towards one end, orange colour. Rather boldly ornamented with an irregular pattern formed by numerous depressions arranged in rows. On twigs and shoots of wild rose. April.

Yellow Shell Moth.—*Larentia (Tr.) bilineata (L.)*—Page 62. Eggs flat, ovoid, pearly white. Boldly adorned with a network consisting of a small number of large roughly hexagonal depressions. Laid amongst grasses and low herbage. September.

Common Marbled Carpet Moth.—*Larentia (Tr.) truncata (Hufn.)*—Page 63. Eggs flat, ovoid, rather squared at one end. Surface shiny but roughened with tiny pits. Colour waxy white with a yellowish tinge. Laid August and September on willow.

Barred Straw Moth.—*Larentia (Tr.) dotata (L.)*—Page 64. Eggs flat ovoid, with one end squared. Surface dull and roughened with very minute depressions. Pale pinkish brown. Laid on a dock leaf. July.



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